

Amendment dated August 26, 2005
Reply to Office Action dated February 28, 2005

Application No. 10/045,122

REMARKS/ARGUMENTS

Claims 1-46 are pending in this application. Of these claims, claims 15-22, 41 and 46 are withdrawn from consideration. Claims 1-14 and 23-44 are rejected. Through this Amendment, claims 1, 7, 23 and 26 have been amended and claim 6 has been canceled. No new matter has been introduced into the application. As explained in more detail below, Applicant submits that all claims are in condition for allowance and respectfully requests withdrawal of the rejections.

Rejection under 35 USC §112

Claims 6 and 7-14 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 6, Applicant has cancelled the claim to obviate the rejection. The amendment is without prejudice to the Applicant prosecuting the subject matter of claim 6 in a continuing application.

Regarding claim 7, the Office Action alleges the scope of the claim is unclear. More specifically, the Examiner recognizes the claim as originally presented was directed towards an extension unit, however, is now unsure whether the claim remains directed towards an extension unit or also includes a pulse generator and electrode array. Claim 7 remains directed towards an extension unit that is adapted to be electrically connected to an implantable pulse generator. To more clearly indicate this aspect of the claimed extension unit, claim 7 has been amended to indicate as such.

The Office Action also seeks clarification regarding claim 7 (and dependent claims 8-14) on whether an output source of an impulse generator connected to the extension unit of claim 7 or the extension unit, itself, is configured to simultaneously trigger the plurality of electrodes. Applicant has amended claim 7 to more clearly define this aspect of the claim.

In view of Applicant's amendments and Remarks above, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Rejection under 35 USC §102

Claims 1-14 and 23-44 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,628,934 to Pohndorf, et al ("Pohndorf").

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Amended independent claim 1 recites the claimed element of "the extensor unit being distant from the implantable pulse generator relative to the electrode array" (Emphasis Added). Applicant respectfully submits that at least this claimed element is not disclosed in Pohndorf.

The Office Action asserts Pohndorf teaches an apparatus comprising an impulse generator coupled to an implantable electrode array wherein an extension unit is coupled between the implantable pulse generator and the implantable electrode array. More specifically, the Office Action asserts that elements 348 and/or 378 shown in Figures 8 and 9 of the '934 patent anticipate the extension unit of claim 1. Furthermore, the Office Action states:

Examiner considers the extension unit to include the lead bodies upon which the electrodes reside. Given the fact that the extension unit plugs into the header, that the header is spaced from the pulse generator residing within the housing 36, and the electrode array is contained on the extension unit, one can clearly see that the extension unit is distant from the implantable pulse generator relative to the electrode array.

Office Action Page 5, lines 17-22.

Applicant respectfully submits that elements 348 and 378 are referred to in the specification of the '934 patent as "switching/selection circuit[s]". (Col. 10, lines 26-27, 41, 47-51) The "switching/selection circuit" is also illustrated in Figures 1-7 as 70, 121, 281, and 328. As shown in the figures, the switching/selection circuits are mounted within or directly adjacent the pacer (implantable pulse generator). (See, e.g., Col. 6, lines 52-55; "[t]he neck 38 of the pacer 20 has mounted therein an electronic electrode switching/selection circuit 70. See also, Figures 6-7).

This is in stark contrast to independent claim 1 which explicitly recites that "the extension unit being distant from the implantable pulse generator relative to the electrode array. . . ." (Emphasis Added). The alleged extension units of Pohndorf cannot be considered distant from the impulse generator relative to the electrode array if the alleged extension unit is within or directly adjacent the impulse generator. The Office Action attempts to overcome this missing claimed feature in Pohndorf by asserting that "extension unit to include the lead bodies upon which the electrodes reside" and that the electrodes are somehow "contained on the extension unit." (Office Action, Page 5, lines 17-21).

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Applicant respectfully submits that Office action reading is incorrect. Applicant submits that Pohndorf describes the switching/selection circuits as separate from the multi-electrode leads having tip electrodes and does not disclose, teach, or suggest a switching/selection circuit encompassing lead bodies.

Moreover, the elements contained within the switching/selection circuits cannot be considered electrodes. Rather, these components are referred to as "connector rings" (see Figure 4 and 5, elements 291, 292, or 293) and the electrodes are distant elements 295-298.

Furthermore, claim 1 is also allowable for at least an additional reason. Claim 1 has been amended to further clarify the invention. In particular, amended claim 1 includes the claimed feature of:

the extension unit including a first electrical path between the implantable pulse generator and the extension unit and a second electrical path between the extension unit and the electrode array, the first electrical path being greater than the second electrical path.

Applicant respectfully submits the Pohndorf does not disclose this additional claimed feature. In particular, amended claim 1 now recites that both the geographical distance and the electrical path distance between the extension unit and the implantable pulse generator are greater than the geographical distance and electrical path distance between the extension unit and the electrode array. Applicant respectfully submits that Pohndorf does not teach either of these features. Applicant respectfully requests withdrawal of the rejection for at least the above discussed reasons. Dependent claims 2-4 and 5 which depend from independent claim 1 are allowable for at least the same reason as independent claim 1.

Referring to independent claim 7, the Office Action states that Pohndorf teaches an implantable pulse generator having a number of output sources connected to an implantable electrode array. More specifically, the Office Action "considers the output sources of Pohndorf et al. invention to be configured to simultaneously trigger a plurality of electrodes simply dependent upon the arrangement of the switching array lying between the output sources and the electrode array." (Office Action, Page 6, lines 14-17).

Claims 7 and 23 have been amended to more clearly indicate that at least one switch of the extension unit is configured to simultaneously trigger a plurality of electrodes. Applicant respectfully submits that Pohndorf does not disclose a device where at least one switch is

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configured to simultaneously trigger a plurality of electrodes. Rather, Pohndorf merely discloses a device where tandem switching is provided with multiple conductors and multiple control circuits.

For instance, Pohndorf states:

In FIG. 9, there is shown and illustrated in abstract form a similar electronic electrode switching/selection circuit means 378 including tandem switching; to provide for selective switching of two input conductors 381 and 382 to four output leads 384, 385, 386, 387.

Col. 10, lines 47-51.

Applicant respectfully submits that the tandem switching described in Pohndorf does not disclose, teach, or suggest the claimed feature of "at least one switch is configured to simultaneously trigger a plurality of electrodes." Similarly, claim 26 includes the claimed feature of "wherein the switches are configured to simultaneously trigger a plurality of electrodes" and is allowable for at least the same reason as claims 7 and 23.

Moreover, claims 23 and 26 are allowable for at least an additional reason. Claims 23 and 26 recite an extension unit that is connected to a distant pulse generator or diagnostic device. Because Pohndorf does not disclose such features of the rejected claims, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 7, 23, and 26. Dependent claims 8-14, and 27-39 which ultimately depend from one of claims 7 or 26 are allowable for at least the same reason as claims 7 and 23. Additionally, claims 24 and 40 are allowable for at least the same reason as claims 23 and 26.

Applicant respectfully requests consideration of the pending claims and a finding of their allowability. A notice to this effect is respectfully requested. Please feel free to contact the undersigned should any questions arise with respect to this case that may be addressed by telephone.

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Respectfully submitted,

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